

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CE) (Sem.-5th)
CONSTRUCTION MACHINERY AND WORKS
MANAGEMENT

Subject Code : CE-301

Paper ID : [A0612]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

- SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
- SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

- Differentiate between activity and event.
- Define 'line of balance' in a construction project.
- What is a milestone chart?
- What is the 'optimum time estimate' used in PERT?
- What is a dummy? Where should a dummy be used?
- What is direct cost in any construction project?
- What is meant by resource smoothing?
- List the factors affecting the selection of construction equipment.
- What type of equipment will you use for
 - Shallow trenching
 - Deep pit excavation
- How do you express the out put of a concrete mixer?

SECTION-B

- What are bar charts? What are its limitations?
- What is meant by specifications as applied to construction management? Explain its importance.
- What is meant by job layout? Prepare a job layout for laying 50 km of a National Highway.
- Enumerate the steps taken in scheduling with LOB and explain how it is advantageous in construction field.
- Compare the working of a Belt conveyor and a Bucket conveyor.

SECTION-C

- The details of a network are given below where the duration are in days.

Activity	t_0	t_m	t_p
1-2	2	5	8
1-3	1	4	7
2-3	0	0	0
2-4	2	4	6
2-6	5	7	12
3-4	3	5	10
3-5	3	6	9
4-5	4	6	10
4-6	2	5	8
5-6	2	4	6

Find

- the probability of completing the project in 23 days
 - the critical path
- Explain how the change in depreciation rate may affect the profitability of a firm
 - Differentiate between 'standard equipment' and 'special equipment'. What are the occasions in which specific equipment are required.
 - Write short notes :
 - Minimum total cost of project
 - Time grid diagram
 - Contracts and tenders
 - Economic life of equipment